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2,899,698

SPONGE CLEANING ELEMENTS FOR MOPS

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My invention relates to improved sponge cleaning elements for mops.

Important objects of the invention are to provide sponge cleaning elements which are particularly adapted for use with self-wringing type mops having either a front or back presser for squeezing the water out of the sponge cleaning element; to provide a sponge cleaning element having such a shape in cross section that the forward edge or toe of the same will readily reach into corners during the mopping operation, regardless of the particular type of mop to which the sponge cleaning element is applied; to standardize the shape of the sponge cleaning element so that it may be readily used in connection with most types of self-wringing mops now on the market, thus eliminating the necessity of the retailer carrying in stock several different types or shapes of sponge cleaning elements to meet customer demands; to provide a sponge cleaning element for mops which may be readily cut from a block of sponge, with the minimum loss of material.

In United States Patent 2,358,673 is shown and described a sponge cleaning element so shaped that it is especially adapted for use with front presser mops. In United States patent to N. B. Greenleaf et al., 2,594,553, a sponge mop element is shown and described which is especially adapted for use with back presser mops. Front and back presser mops are in common use today. The shape of my sponge cleaning element which is the subject of the present invention is such that such sponge cleaning element may be advantageously used with either front or back presser mops.

In my Patent 2,358,673, there is shown and described a sponge cleaning element having a shape which renders it particularly well adapted for use in mops with a front presser. These front pressers are shown in Patents 2,153,601 and 2,165,319. The sponge cleaning element of Patent 2,358,673 is also adapted for use without the presser. The sponge cleaning element of Patent 2,358,673 has a toe which readily enters into corners occurring between a wall and floor. The shape of sponge cleaning element shown in Patent 2,358,673 is not suitable for use in connection with a back presser mop because in the squeezing operation the toe of the sponge cleaning element would be forced too far forwardly beyond the backing element of the sponge cleaning element and hence the forward portion of the sponge cleaning element would not be properly compressed. In this shape of sponge cleaning element, the scrubbing face is greater than the attaching face.

In United States patents to N. B. Greenleaf et al., 2,594,553 and 2,515,403, are shown and described a sponge cleaning element having a shape which renders it particularly well adapted for use in mops of the back presser type, as shown in Patent 2,515,403. However, the shape of the sponge cleaning element is such that the scrubbing face is less than the attaching face. Further, in the forward scrubbing operations, the toe of the sponge cleaning element is drawn back under the front

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edge of the backing member, and such toe will not readily reach into corners formed by intersection of the floor and wall. Further, this shape of sponge cleaning element is not particularly suitable for mops having a front presser, particularly in mops having a front presser having a single hinge action, since the barrel of the hinge will extend well forwardly of the toe of the sponge cleaning element.

The sponge cleaning element embodying the present invention is of such a shape that it may be effectively used in most mops now on the market, which mops have either a front or back presser, and may also be used upon mops which have neither a front or back presser. My improved sponge cleaning element has the forward toe which will advantageously enter corners during the forward stroke of the mop.

In the accompanying drawings forming a part of this application and in which like numerals are employed to designate like parts throughout same,

Figure 1 is a perspective view of a sponge cleaning element embodying my invention,

Figure 2 is an edge elevation of a slab of hygroscopic sponge, and dotted lines illustrating the method of cutting the sponge cleaning elements in the proper shape,

Figure 3 is an end elevation of the sponge cleaning element embodying my invention, showing the same with its toe entering the corner between the wall and floor, and also showing the lines indicating the angles upon which the top and bottom faces are cut,

Figure 4 is an end elevation of a sponge cleaning element having the shape as shown and described in United States patents to N. B. Greenleaf et al., 2,515,403. and 2,594,553.

Figure 5 is an end elevation of the sponge cleaning element having the shape as shown and described in United States Patents 2,163,638; 2,153,601 and 2,165,319, the toe of the sponge cleaning element being moved into the corner formed by the wall and floor,

Figure 6 is an end elevation of a block of hygroscopic sponge, and a line, illustrating the method of cutting the sponge cleaning elements shown in Figures 4 and 5.

Referring first to Figures 1 to 3 inclusive in which the sponge cleaning element embodying my present invention is shown, the numeral 1 designates the sponge cleaning element which embodies the present invention and having the desired shape in cross section. This sponge cleaning element is preferably formed of hygroscopic sponge. The sponge cleaning element 1 is preferably elongated and has the shape in cross section of a frustrum or truncated wedge. For convenience of terminology, the particular cross-sectional shape will be termed in the specification and the appended claims an isosceles trapezoid in that it is characterized by being a four-sided figure having two opposite sides thereof parallel with the other two sides being of equal length and non-parallel. In other words, it is truncated isosceles triangle in which the truncating plane is parallel to the base of the triangle. The element 1 has a front face 2 and a rear face 3, which are parallel, and the front face 2 is vertically longer than the rear face 3. The element 1 has an upper face 4 and a lower or bottom face 5, which form an acute angle with each other. The forward face 2 forms an acute angle with the top face 4 and the bottom face 5. The acute angles that the upper face 4 and the lower face 5 forms with the front face 2 are relatively large so that the front edge of the bottom face 5 extends forwardly beyond the front edge of the top face 4 for a short distance, forming the toe T. This distance is indicated at 25. The rear face 3 forms an obtuse angle with the top face 4 and the bottom face 5. A relatively stiff or rigid attaching or backing plate or element 6 is secured to the top face 4 by an adhesive,